

## REMARKS

In the Office Action mailed May 19, 2005, the Examiner rejected claims 1-29 under 35 USC § 102(e) based on US Patent 6,502,132 to Kumano et al. ("Kumano"). Applicants traverse the rejections and respectfully request reconsideration.

### I. The Kumano Reference

The Kumano reference describes a network monitoring system where each of the monitored devices may be polled for status information. In addition, Kumano proposes a scheme whereby the monitored devices send summary status information in the header of any messages (other than status reporting messages) sent to the monitoring device. This allows the monitoring device to collect status information without having to wait for the next polling period. See Kumano abstract; Col. 1, lines 60-63; Col. 8, lines 2-6. In addition, the monitoring device is able to skip certain devices during a polling event if that device has already provided summary status information by way of a message header during the prior interval. Col. 9, lines 19-28.

Kumano uses the term "STATUS" to refer to the presence or absence of a condition.

Specifically, Kumano identifies the following STATUSES:

- Presence/absence of device alarm
- Presence/absence of transmission line alarm
- Presence/absence of path alarm
- Presence/absence of switching
- Presence/absence of testing

See figures 4, 17, 20B. Collectively, Kumano refers to these as a "SUMMARY STATUS", in figure 14B and more clearly in figure 17. The "SUMMARY STATUS" is actually built up by the

monitoring device. The various "STATUS" are detected by monitoring the monitored devices (though the monitored devices can also explicitly send an alarm to the monitoring device indicating a STATUS change).

## **II. The Claimed Invention**

The presently claimed invention is a method of monitoring a network of devices in an adaptable way, based on the type of devices in the network and/or where the network changes in size. In such a situation, certain types of devices may need to be monitored using different monitoring procedures, or the procedure may need to change when the number of any particular device changes. In the preferred embodiments, as described in the specification, there at least two types of device (core and edge).

In particular, independent claims 1 and 16 recite that the monitoring of the different devices is performed "at different time intervals". In independent claim 15, the method addresses the change in interrogation intervals in the situation where the number of devices is altered: it recites *inter alia* that "when the number of devices has entered a new range, then get new interrogation time intervals for said first and second types of devices".

Similarly, independent claim 21 recites that the monitoring procedure changes with the number of devices. Independent claims 30 and 31 both recite that the monitoring procedure includes monitoring of the different devices "at different intervals" and that the monitoring procedure changes with the number of devices.

## **III. Response to Rejections/Objections**

The Examiner has rejected claims 1, 3-16, and 17-31 as being anticipated by Kumano (US Patent No. 6,502,132). Regarding claim 1, applicants have now revised claim 1

to include the features of claim 4. Thus, Applicants will address the Examiner's objection to claim 1 and the previous claim 4.

The Examiner asserts that Kumano teaches a method of monitoring a network of devices comprising the step of defining at least two types of device, and monitoring the different types of device using different monitoring procedures "(column 7, line 64 - column 8, line 9. Kumano discloses network monitoring system monitoring devices connected to a network with each device having various statuses)". In addition, the Examiner refers to column 9, lines 20-28 which the Examiner considers disclose polling intervals.

The applicants respectively traverse the Examiner's objections on a number of grounds. Applicants submit that Kumano nowhere teaches an arrangement in which there is a network with different types of device and in which the different types of device are monitored in different ways. Applicants submit that it may be that the Examiner is not correctly interpreting the word "device having various statuses" from the prior art Kumano reference. This point has been discussed with the inventor who is an expert in the field, and the expression "devices having various statuses" does not refer to different types of device, i.e. different groups of devices such as core devices or edge devices. The "devices having various statuses" simply means that in the relevant device there is stored information relating to a number of aspects of that device. For example, in column 1, lines 55-61, Kumano sets out that "each bit of the summary status represents such items as presence/absence of a device alarm, a presence/absence of a transmission-line alarm, presence/absence of a path alarm, presence/absence of switching, and presence/absence of testing". There is no reference to the type of device, for example an edge device or a core device, nor any

equivalent. Consequently, applicant submits that Kumano nowhere discloses monitoring different types of devices using different monitoring procedures.

Moreover, Kumano describes a "polling operation performed at constant intervals" and that it "skips a given polling operation" if it receives a status update from one of the monitored devices in a prior constant interval (column 9, line 22-28). Kumano makes no reference to using different *time* intervals for monitoring. This has been discussed with the inventor, an expert in the field, who submits that skipping a poll if it is not required (e.g. if there has been a recent poll of that device) is not "using different time intervals". Furthermore, if, for argument's sake, the Examiner considers that that is the meaning, there is no mention of skipping a poll based on the device type or any other quality of the monitored device.

Furthermore, Kumano is using "STATUS" to refer to the presence or absence of a condition such as a device alarm, transmission line alarm, path alarm, switching, and testing. Thus, the term "STATUS" refers to a monitored condition on the device, not the type of the device itself. Applicants submit that it is improper to equate these as being one and the same.

As set out above, claim 1 has now been amended to include the features of claim 4, that the said defined types of devices comprise core devices and edge devices. In this regard, the Examiner states that column 7, line 64 to column 8, line 9 discloses defined types of device which comprise core devices and edge devices. Applicants can discern no such teaching in that reference. While networks may have core devices and edge devices, claim 1 does not claim the provision of core devices and edge devices *per se*. Rather, the

claimed invention relates to the use of different monitoring techniques as determined by the type of device being monitored.

In view of the arguments set out above it is submitted that claim 1, as now amended is allowable under 35 USC 102.

With regard to the Examiner's objection to claim 5, the same argument apply as to claim 1, that is that the "defined" types of devices are not the same as "the status" of the relevant device.

Regarding the Examiner's objection to claim 6, that Kumano in column 15, line 44 to column 16, line 5 discloses a counter of the number of devices which can change the summary status which then changes the control command, Applicants submit that the counting of monitored devices in the relevant quotation is to build a list of status summaries for each device. This can be clearly seen from Figure 25 (showing steps 41-45 referred to in the relevant Kumano extract). When the number reaches the number of monitored devices, the process stops. In other words, it simply arranges for the relevant total number of monitored devices to be monitored and then stops the process when the number of devices which have been monitored equals the number of devices in the network. This is the sole relevance of the number of devices in this extract from the specification. There is no reference to changing the frequency of interrogations of the devices as the number of devices changes. Indeed, there does not seem to be any reference to the possibility of the number of devices which are counted being changed. The applicants submit that there is no disclosure in Kumano of changing the monitoring procedure in accordance with the number of devices in the network as determined. There is no determination of the number of devices, merely counting of the number of monitoring devices up to the predetermined total

and there is no change in the monitoring procedure in accordance with any kind of counting of numbers.

It is therefore submitted that claim 6 is allowable under 35 USC § 102.

With regard to claim 7, the same arguments apply as those set forth above with respect to claim 1. That is, the polling interval of Kumano does not change. Rather, there is the simple skipping of a poll of a particular device if it has recently reported its status information.

Regarding claim 8, the arguments made with respect to claim 7 apply, and it is therefore submitted that claim 8 is allowable.

It is submitted that claims 3, 5, and 14 are further allowable as they are claims dependent upon an allowable claim, claim 1.

It is further submitted that claims 7-10, 13 are allowable as being claims dependent upon an allowable claim, claim 6.

Independent claim 15 is allowable because it recites the limitation, not found in the prior art: "when the number of devices has entered a new range, then get new interrogation time intervals for said first and second types of devices".

Regarding claim 16, Applicants have amended the claim. Claim 16 is allowable for the same reasons as claim 1: it recites that the monitoring of the different devices is performed "at different time intervals". Claims 18-20 depend from claim 16 and are also therefore allowable.

Similarly, independent claim 21 recites that the monitoring procedure changes with the number of devices. As described above, this aspect of altering the monitoring

procedures is simply not present in Kumano. Claims 22-28 depend from claim 21, and are also therefore allowable.

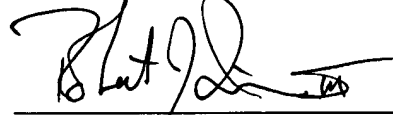
Regarding claims 30 and 31, Applicants have amended the claims 30 and 31. Independent claims 30 and 31 both recite that the monitoring procedure includes monitoring of the different devices "at different time intervals" and that the monitoring procedure changes with the number of devices. Because these elements are lacking from the prior art, as explained above, these two claims are allowable.

#### **IV. Conclusion**

The Applicants submit that the application is in good and proper form for allowance and respectfully request the Examiner to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney, at 312-913-3305.

Respectfully submitted,

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